*Chapter 19 Developing Measurement Concepts Joanna Coslett*

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| **Representative TN State Curriculum Standards**  1st Grade-  GLE: 0106.4.3 Use non standard units in linear measurement Check for Understanding:  0106.4.6 Recognize the essential role of units in measurement, and understand the difference between standard and non-standard units  2nd Grade-  GLE:  0206.4.2 Understand the meaning and process of linear measurement  0206.4.3 Add, subtract, compare, compute and estimate linear measurements  Check for Understanding:  0206.4.4 Estimate, measure, and calculate length to the nearest unit: meter, centimeter, yard, foot, and inch  0206.4.6 Understand the inverse relationship between the size of a unit and the number of units used in a particular measurement (the smaller the unit, the more iterations needed to cover the length.) | |
| http://www.thereadingnook.com/image_manager/attributes/image/image_3/0805065725_large.jpg  Time: 5 minutes | Used to develop the concept between standard and non-standard units   * I will use the book *Measuring Penny* to get students interested in the variety of ways familiar items can be measured. * I will bridge between non-standard and standard units and the class will measure items around the classroom using both non-standard and standard units. * I will provide a worksheet with the items listed so the class can record their answers in non-standard units (dog biscuits) and standard units (inches, centimeters, feet, etc.) |
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**Virtual Manipulatives** Time: 10 Minutes

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| *The Fearless Flying Fleas* [*http://www.pearsonschool.com/live/images/custom/envisionmath\_ca/games/flea11.html*](http://www.pearsonschool.com/live/images/custom/envisionmath_ca/games/flea11.html)  Objective: The player will estimate the length of an object using non-standard units. The player will then get a chance to check their estimation. This game also gives an option for the player to estimate using a standard unit which is great and gives the player a chance to see both measurements. The Flying Flea will then jump the object if your estimation is correct. |
| *Shape Surveyor*  <http://www.funbrain.com/poly/index.html>  Objective: The player will determine the area or perimeter of a rectangle. For every problem they answer correctly, you will receive a piece of the puzzle until the puzzle is complete. |

**Activities from the textbook**:  
**Materials needed:** Rulers, Meter Sticks, Worksheets provided by teacher, 1 cm grid paper, Pattern Blocks, Ten grams, Scissors

1. 19.21 About One Unit p. 388; 5 minutes
2. Topic: Familiarity with a unit
3. 19.23 Personal Benchmarks p. 388; 5 minutes
4. Topic: Measuring different parts of body
5. 19.26 Estimation Scavenger Hunt p.391; 5 minutes
6. Topic: Estimation with length
7. Fixed Area Rectangles and Perimeters: found at http://literacyandnumeracyforadults.com/The-Learning-Progressions/Numeracy/Measure-and-Interpret-Shape-and-Space/Activities-table/Fixed-area-rectangles-and-perimeters ; 5 minutes
8. Topic: Discovering a formula for area and perimeter of rectangles

**Additional Activity:** Area of a Parallelogram; 5 minutes

19.27 Area of a Parallelogram p. 393  
 Topic: Using previous knowledge about area to find the area of a parallelogram

**Lesson Plan:**

**Length Measurement Hunt**

<http://illuminations.nctm.org/LessonDetail.aspx?id=L873>

Go on an exciting measurement hunt around the classroom in search of items that are longer than, shorter than, and the same size as their piece of yarn. Pairs of students compare the length of their piece of yarn to objects around the classroom. They find and record at least one object that is longer than, one that is shorter than, and one that is the same size as their piece of yarn.